



# MDC Resource Science

## Science Notes

### Evaluation of Streambank Erosion Control Methods for Missouri Streams



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# Evaluation of Streambank Erosion Control Methods for Missouri Streams

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## Summary

Excessive erosion of streambanks is a problem for landowners along many streams. Techniques currently used in Missouri to protect streambanks are effective when applied appropriately, but have limitations that prevent them from being useful in some situations. A project was initiated to examine potential bank stabilization techniques in the hopes of providing landowners with more options for stabilizing streambanks. A process was developed for selecting and evaluating potential techniques. The steps were:

- Establish review process for techniques
- Select techniques for evaluation
- Select test locations (MDC land) and install projects
- Monitor results after high flow events
- Evaluate performance of techniques using an adaptive approach
- Recommend techniques to landowners

The review process consisted of gathering ideas and input from the literature, MDC staff, and landowners. The list of potential techniques was narrowed down based on

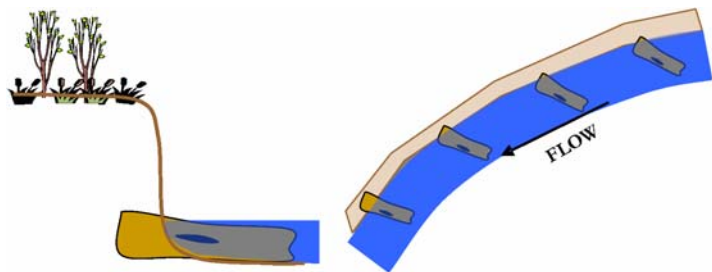


Figure 1: Diagram of a log weir project after installation.

hydraulic and geomorphologic principles, costs, and landowner feedback. The six techniques selected were: log weirs (Figure 1), farm rock weirs (Figure 2), toe protection

using farm rock, back sloping with revegetation, gravel roles, and grade control structures. Each technique will be

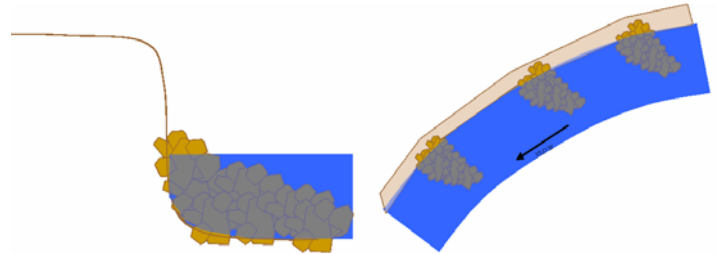


Figure 2: Diagram of a farm rock weir project after installation.

initially tested and evaluated on multiple MDC areas. Site selection and project implementation are currently underway. Two projects have been constructed: a log weir and a farm rock weir project both constructed on Jakes Creek on Lead Mine Conservation Area in Dallas County. Monitoring (Figure 3) will consist of a physical survey of the bank, a GIS Map, photopoints, flow monitoring, and cost of the project. Monitoring frequency

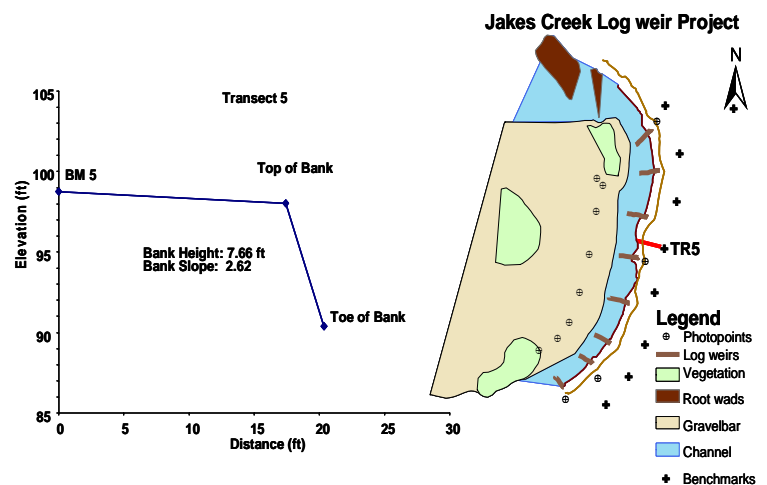


Figure 3: Example of monitoring results.

and timing will be controlled by the occurrence of high flow events. Final evaluation of a technique will be based on performance at each site. Once a technique has been evaluated and determined to be effective it will be added to the list of techniques that can be recommended to landowners for addressing erosion problems.

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